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**Outer Continental Shelf Oil and Gas
Information Program:**

**ATLANTIC INDEX
(JANUARY 1975-APRIL 1979)**

**U.S. Department of the Interior,
Geological Survey
and the
Bureau of Land Management,
in Cooperation with the
Council on Environmental Quality**

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Outer Continental Shelf Oil and Gas Information Program:
Atlantic Index

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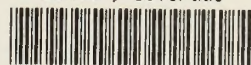
An Annotated Guide to
Reports and Documents Used by the
Federal Government in the Decisionmaking
Process for Leasing, Exploration, Development, and
Production of the Outer Continental Shelf

Prepared for the
U.S. Department of the Interior,
Geological Survey and the
Bureau of Land Management,
in Cooperation with the
Council on Environmental Quality
under Contract No. EQBAC020

This report has not been edited for conformity with the publication
standards of the Geological Survey or the Bureau of Land Management.

May 1979

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Mr. J. Ronald Jones
Chief, RALI Program
U.S. Geological Survey
750 National Center
Reston, Virginia 22092

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*These documents have not been prepared for the Atlantic Area because marketable mineral resources have not yet been discovered. Therefore, only descriptions of the documents are presented.

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INTRODUCTION

The Outer Continental Shelf Lands Act of 1953, as amended in 1978, grants to the Secretary of the Interior the authority to issue leases for minerals on the U.S. Outer Continental Shelf (OCS). It provides the authority and guidelines which the Secretary utilizes for expeditious exploration and development of the OCS while ensuring timely access to information by affected states and local governments in order that appropriate planning will anticipate and ameliorate impacts from such OCS activities.

This document is prepared in accordance with Part 30 of the Code of Federal Regulations (CFR), Section 252.5 and 43 CFR, Section 3301.8, which require that the Directors of the U.S. Geological Survey and the Bureau of Land Management shall make available an Index, listing all relevant, actual or proposed programs, plans, reports, environmental impact statements and other lease sale information, on a regular basis, to each affected state and, upon request, to the executive of any local government whose jurisdiction covers an area affected by OCS activities. Accordingly, the Geological Survey and the Bureau of Land Management are cooperating in a joint effort to compile all relevant information on the OCS Oil and Gas Leasing Program in an Index with four volumes; Alaska, Atlantic, Gulf of Mexico and Pacific.

This volume is a compilation of documents used in the Atlantic Area OCS decisionmaking process, and its format parallels this process. The bibliographic references are presented by lease sale number, in the sequence in which the documents are generated in the Federal OCS leasing program. Thus, the reader may compare all documents of one type in the Atlantic Area or trace a single lease sale throughout the entire leasing process. Activities which are ongoing throughout the OCS lease sale process are described under Other Documentation and Supplemental Reading. Other Documentation pertains to Federal data gathering and analysis programs which are an integral part of the OCS decisionmaking process and are used throughout the process due to the usefulness of their subject matter. The Supplemental Reading documents are not used in decisionmaking but are invaluable sources of general OCS information.

Except when noted otherwise, all of the documents listed are available as of April 1979; pre-sale documents can be reviewed at the regional OCS offices shown below:

Area: Maine to Virginia

New York OCS Office,
Bureau of Land Management
Suite 32-120, 26 Federal Plaza
New York, NY 10007

(212) 264-2960

Area: North Carolina to Florida

New Orleans OCS Office,
Bureau of Land Management
Hale Boggs Federal Building
500 Camp Street, Suite 841
New Orleans, LA 70130

(504) 589-6541

The post-sale documents can be examined at the following office:

Geological Survey
Conservation Division, Eastern Region
1725 K Street, Suite 204
Washington, D.C. 20006

(202) 634-6615

GENERAL BACKGROUND

As part of a national goal to reduce dependence on foreign energy mineral sources, the United States is currently managing a program for leasing of OCS oil and gas resources. The areas potentially affected, consisting of 22 coastal states and Pennsylvania, can be grouped into four major areas: Atlantic, Gulf of Mexico, Pacific and Alaska (Figure 1). The Atlantic Area contains 14 coastal states and Pennsylvania and is subdivided into the North and Mid-Atlantic (Figure 2) and South Atlantic Sub-Areas (Figure 3). Most of the information used by both the government and industry on the hydrocarbon potential of the Atlantic Area is initially acquired and compiled on a regional basis. These data are used by industry in nominating tracts for lease and in preparation of bids and by the Department of the Interior for general sale area identification, tract selection, environmental impact statements and resource evaluation. Subsequent environmental information and data analysis is directed toward defining specific sub-areas and site-specific evaluation.

Detailed conduct of these activities is carried out primarily by two agencies of the Department: the Bureau of Land Management and the Geological Survey, with assistance from other agencies as appropriate. The Bureau of Land Management is responsible for implementing the leasing objectives of the Outer Continental Shelf Lands Act. During each step of the OCS leasing procedure, the Bureau of Land Management coordinates with agencies both within and outside the Department. Major coordination efforts are conducted on a continuing basis with the Geological Survey which provides technical advice throughout several of the leasing procedures. The Geological Survey also is responsible for supervising and regulating exploration, development and production activities on the leaseholds after leases are issued.

Figure 4 outlines the major pre-sale and post-sale decision points; Figures 5 and 6 list the documents used in the decision-making process. The OCS lease sale program is a long-term process that begins at least 26 months prior to a lease sale and continues through exploration, commercial production, if any, and abandonment. As a result, regional data collection is a continuous activity and several decisionmaking documents may be formalized concurrently.

Continuous data gathering is demonstrated by the preparation of Transportation Management Plans, Regional Environmental Studies Plans and collection of geological and geophysical data (Figure 4). Coordination of this information along with the other documents in the decisionmaking sequence is described in the following sections.

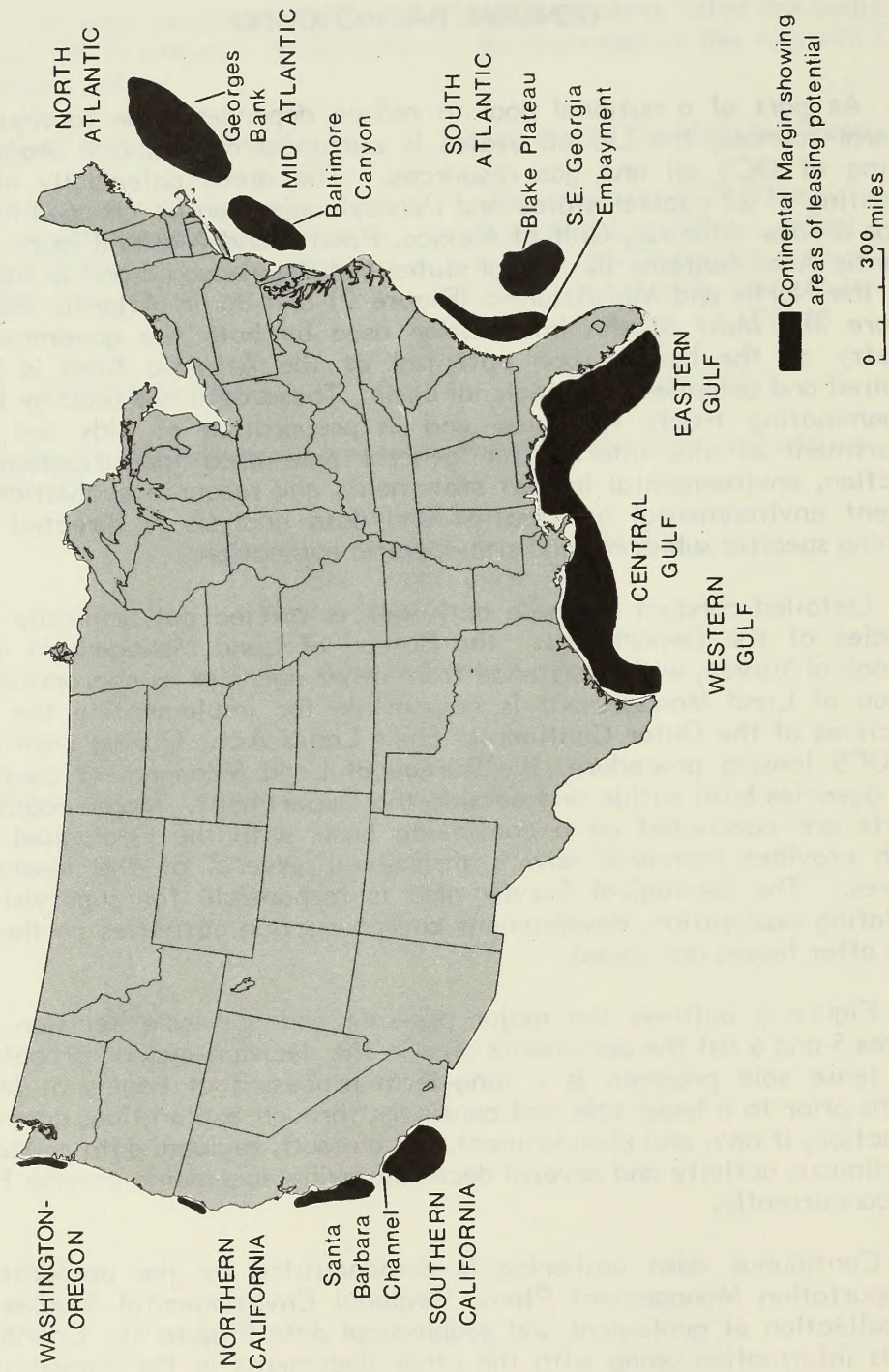
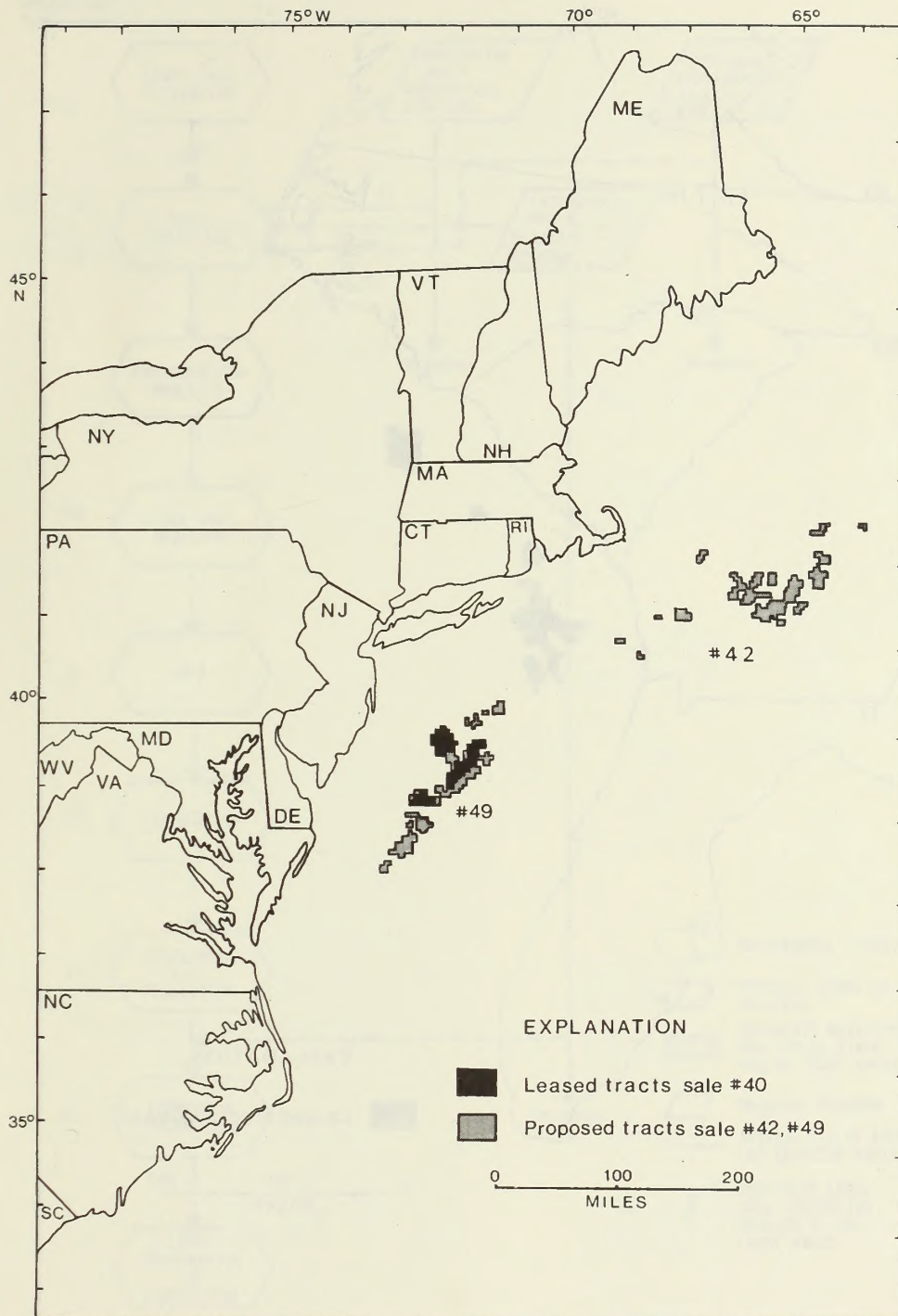


FIGURE 1
OUTER CONTINENTAL SHELF LEASE AREAS,
COTERMINOUS UNITED STATES



Source: USGS, Feb. 1979

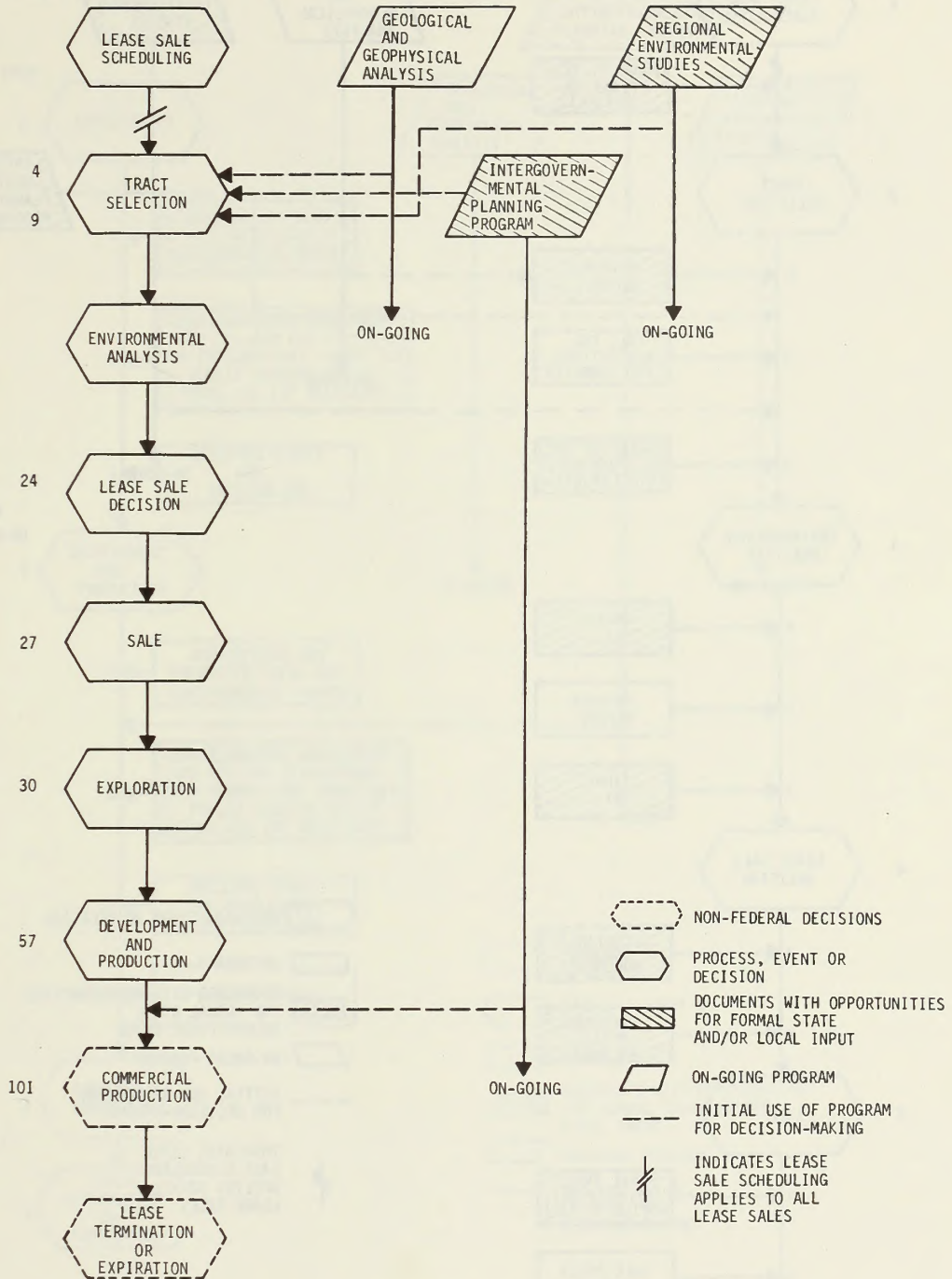
FIGURE 2
OUTER CONTINENTAL SHELF SCHEDULED SALES, NORTH AND MID-ATLANTIC AREAS



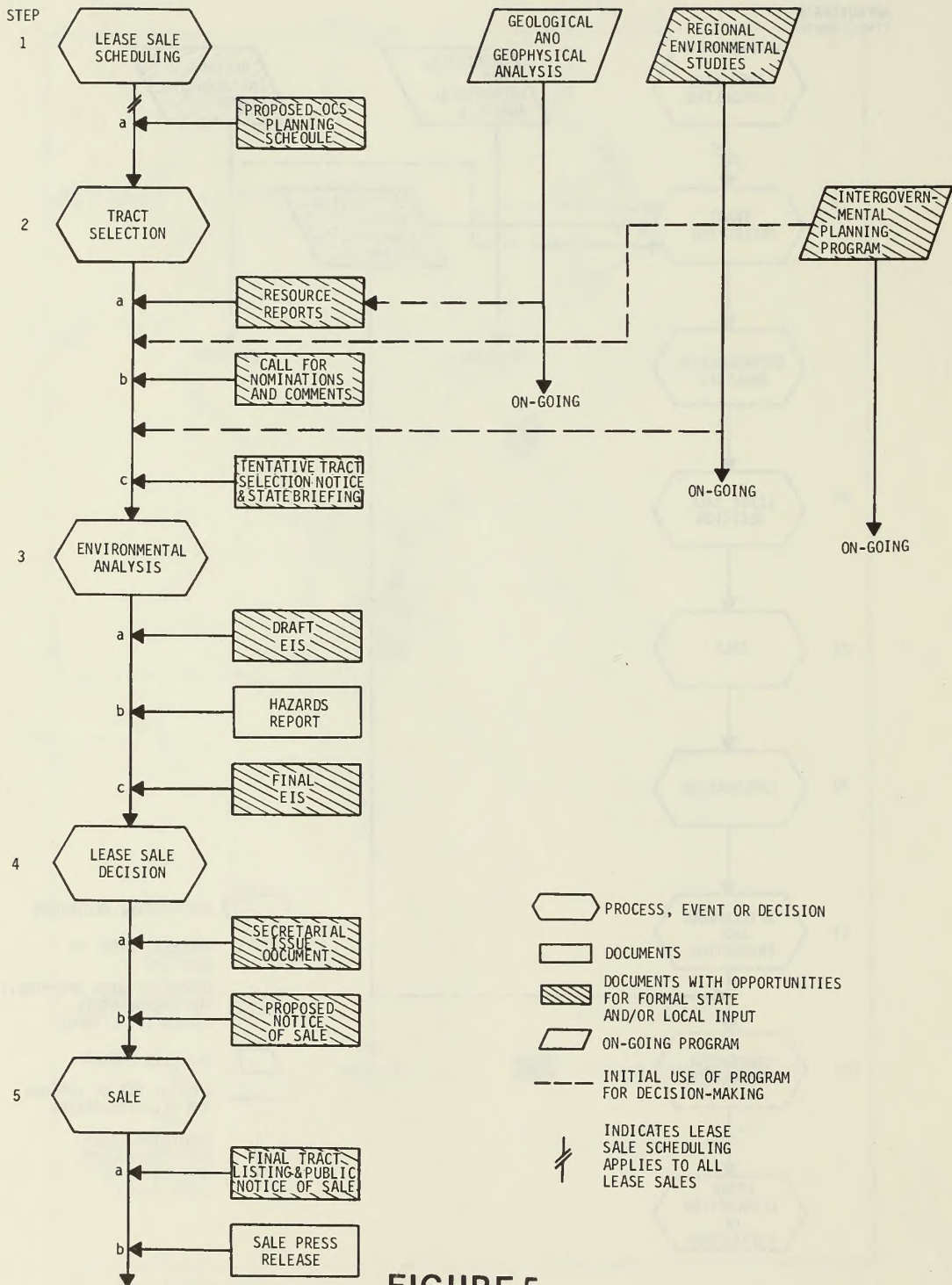
Source: USGS, Feb. 1979

FIGURE 3
OUTER CONTINENTAL SHELF SCHEDULED SALES, SOUTH ATLANTIC AREAS

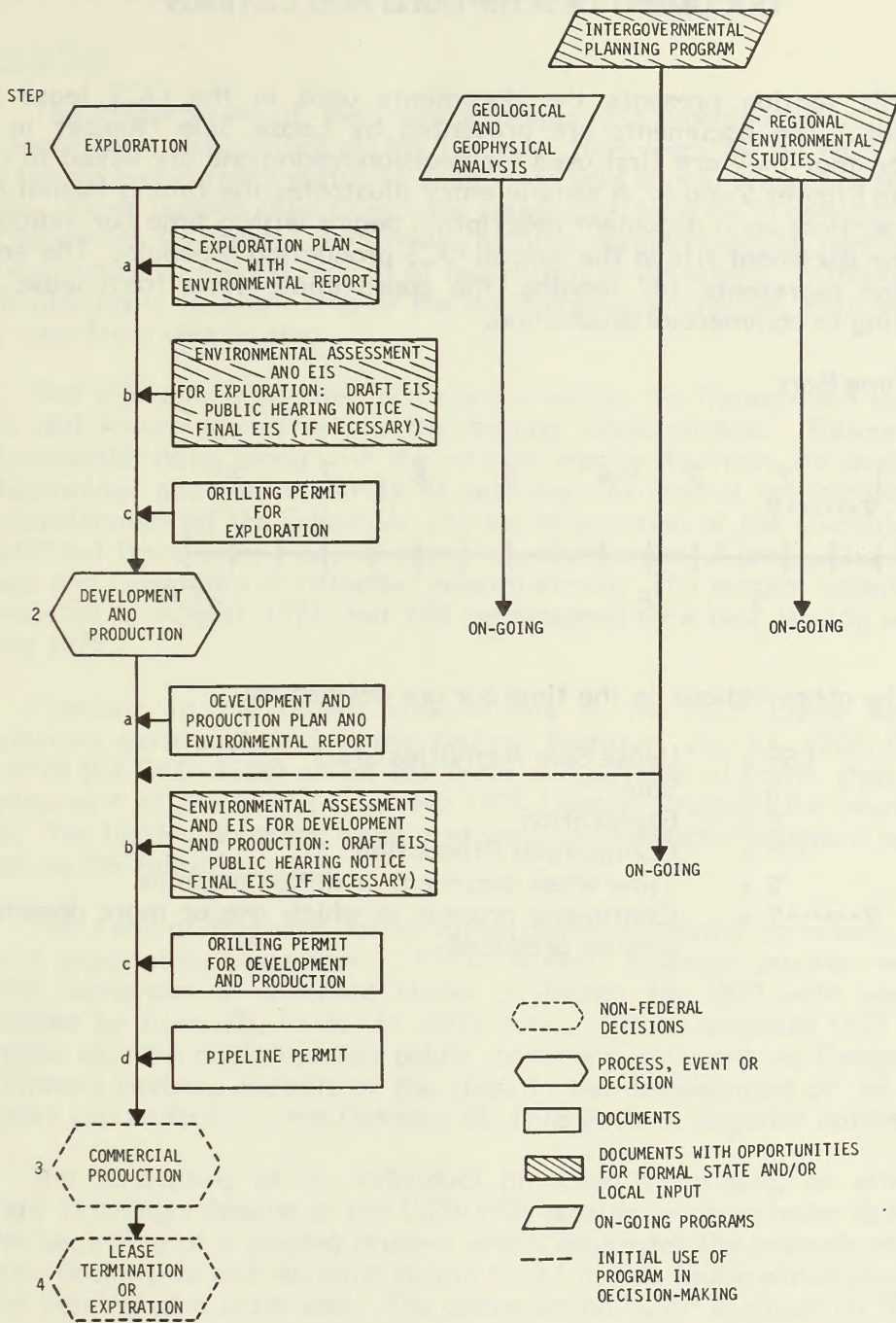
APPROXIMATE
TIME, MONTHS



**FIGURE 4
DECISIONMAKING PROCESS**



**FIGURE 5
PRE-SALE DECISIONS AND REQUIRED
DEPARTMENT OF INTERIOR DOCUMENTS**

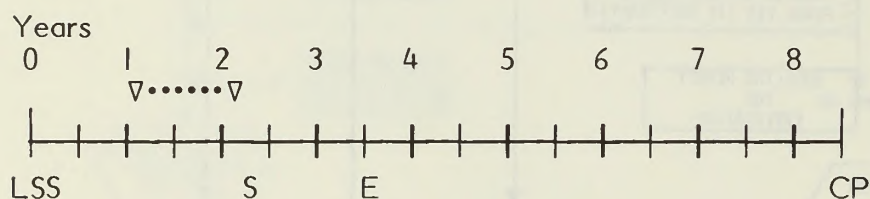


**FIGURE 6
POST-SALE DECISIONS AND REQUIRED
DEPARTMENT OF INTERIOR DOCUMENTS**

DOCUMENT DESCRIPTIONS AND LISTINGS

This section presents the documents used in the OCS lease sale activities. The documents are presented by Lease Sale Number in the sequence that they are first used for decisionmaking and are keyed to their listing in Figures 5 and 6. A sample entry illustrates the timing format used in this section; each document description begins with a time bar indicating when the document fits in the overall OCS production schedule. The entire time line represents 102 months, the approximate time from lease sale scheduling to commercial production.

Time Bar:



The abbreviations on the time bar are defined as:

- LSS = Lease Sale Activities Start
- S = Sale
- E = Exploration
- CP = Commercial Production
- ▽ = Time when document or action pertains
- ▽.....▽ = Continuing process in which one or more documents may be produced

PROPOSED OCS PLANNING SCHEDULE (Figure 5, Step 1a*)

Description

The Department of the Interior prepares a planning schedule listing the lease sales anticipated during the next five years for all OCS regions. The timing and current status of each lease sale is also presented schematically. Three leasing objectives have equal consideration in development of this schedule: (1) orderly and timely resource development; (2) protection of the environment; and (3) receipt of fair return to the public. Although these goals also apply to every step of the decisionmaking process, their emphasis may vary from step to step.

The schedule is updated and revised within the Department as conditions and knowledge affecting the leasing areas change. Resource and environmental data, along with the current energy situation, the availability of technology and the proximity of resources to market are considered in the development of the schedule. During preparation of the schedule, input is solicited from other Federal agencies, environmental and public interest groups and Governors of affected coastal states. The current schedule was formulated in August 1977, but will be replaced by a new leasing schedule during 1979.

Pursuant to the recent amendments to the OCS Lands Act, new regulations were published in the *Federal Register*, Vol. 43, #208, October 26, 1978 (43 CFR 3308) which set forth a timetable of major steps in the development of the initial five-year OCS Leasing Program for years 1980-1985. The leasing program, when approved, will replace the leasing schedule shown on the following page.

The *Federal Register* notice cited above requested comments on the leasing program by December 1, 1978. A draft proposed program was sent to the Governors of affected states on March 10, 1979 with comments requested by April 20, 1979. In early June, 1979, a proposed OCS leasing program will be published for public comment and sent to Congress for preliminary review. Details of the steps in the development of the leasing program can be found in the October 26, 1978 *Federal Register* notice.

The scheduling of an individual proposed lease sale, on either the current planning schedule or the 1980-1985 leasing program being developed, is the beginning of a leasing process which generates the pre-sale analyses, events, documents and decision points listed in this Index which may result in the holding of a lease sale. The abbreviation "LSS" is shown on the time bar to mark the starting point.

*Designates where documents first occur in lease sale activities.

TABLE 1
PROPOSED OCS PLANNING SCHEDULE

SALE AREA	1977			1978			1979			1980			1981		
	J	A	S	J	F	M	J	A	M	J	F	M	J	A	M
41 Cook Inlet															
42 N. Atlantic															
43 South Atlantic Georgia Embayment															
45 Gulf of Mexico															
65 Eastern Gulf of Mexico															
51 Gulf of Mexico															
49 Mid-Atlantic															
48 Southern California															
58 Gulf of Mexico															
58(a) Gulf of Mexico															
*Federal/State Beaufort (near shore)															
55 Gulf of Alaska															
62 Gulf of Mexico															
46 Kodiak															
52 North Atlantic															
53 Central and Northern California															
61 Cook Inlet															
56 South Atlantic Georgia Embayment															
59 Mid-Atlantic															
66 Gulf of Mexico															
57 Bering Norton															

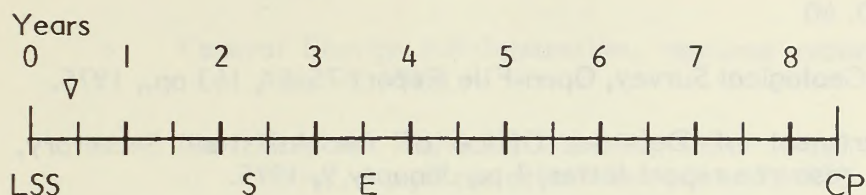
C - CALL FOR NOMINATIONS (Figure 5, Step 2b)
H - PUBLIC HEARING (Figure 5, Step 3a)
O - NOMINATIONS DUE (Figure 5, Step 2b)
F - FINAL ENVIRONMENTAL STATEMENT (Figure 5, Step 3c)
T - ANNOUNCEMENT OF TRACTS (Figure 5, Step 2c)
P - PROPOSED NOTICE OF SALE (Figure 5, Step 4b)
E - DRAFT ENVIRONMENTAL STATEMENT (Figure 5, Step 3a)
N - NOTICE OF SALE (Figure 5, Step 5a)
S - SALE (Figure 5, Step 5b)

Note: The sale of Lease Area #40 occurred August 1976, which predates this OCS Planning Schedule.

* No Lease Sale Number has been assigned

The Department of the Interior
August 1977

RESOURCE REPORTS (Figure 5, Step 2a)



Description

Based on the lease sale areas identified in the OCS Planning Schedule, the Secretary initiates the pre-leasing tract identification process by requesting technical resource reports from all Federal agencies and bureaus with expertise appropriate to the needs of the proposed area, and Governor's offices in the affected states. Within the Department, the Bureau of Land Management, Geological Survey and Fish and Wildlife Service submit resource reports for all potential leasing areas, while the Bureau of Indian Affairs, Bureau of Mines, the Heritage Conservation and Recreation Service and the National Park Service may also submit resource reports. Other Federal agencies may submit resource reports containing general information on the defined geographic region. Other Federal agencies that may submit Resource Reports include:

- o Department of Commerce
 - National Oceanic and Atmospheric Administration
- o Department of Defense
 - Maritime Safety Watch
 - Air Force
 - Army
 - Corps of Engineers
 - Marine Corps
 - Navy
- o Department of Energy
- o Department of Transportation
 - U.S. Coast Guard
 - Federal Aviation Administration
 - Office of Pipeline Safety
- o Council on Environmental Quality
- o U.S. Environmental Protection Agency
- o National Aeronautics and Space Administration

Resource Reports for the Atlantic Region are available for review at the appropriate regional Bureau of Land Management OCS Office listed in the Introduction (p. 2). In addition, the Geological Survey Resource Reports are available as Open File Reports from the Branch of Distribution, U.S. Geological Survey, Box 25286, Federal Center, Denver, Colorado 80225, (303) 234-5888.

Documents

LEASE SALE NO. 40

- o U.S. Geological Survey, Open-File Report 75-61, 143 pp., 1975.
- o Department of Defense, Office of the Assistant Secretary, resource report letter, 1 p., January 9, 1975.
- o National Aeronautics and Space Administration, resource report letter, 3 pp., January 6, 1976.
- o National Oceanic and Atmospheric Administration, resource report letter, 3 pp., attachment, February 14, 1975.
- o Department of Transportation, resource report letter for Federal Aviation Administration, Coast Guard and Office of Pipeline Safety, 11 pp., January 1, 1975.
- o Federal Power Commission, resource report letter, 12 pp., January 14, 1975.
- o Federal Energy Administration, resource report letter, 14 pp., January 10, 1975.

LEASE SALE NO. 42

- o U.S. Geological Survey, Open-File Report 75-353, 179 pp., 1975.
- o Bureau of Outdoor Recreation, resource report letter, 1 p., May 1, 1975.
- o Environmental Protection Agency, resource report letter, 2 pp., June 18, 1975.
- o National Oceanic and Atmospheric Administration, resource report letter, 32 pp., attachment, 1975.
- o National Park Service, resource report letter, 2 pp., 48 pp. attachment, April 27, 1975.
- o Department of Transportation, resource report letter for Federal Aviation Administration and Coast Guard, 6 pp., 14 pp. attachment, May 23, 1975.
- o Federal Power Commission, resource report letter, 12 pp., June 5, 1975.

- o Department of Treasury, resource report letter, 1 p., April 24, 1975.
- o Federal Energy Administration, resource report letter, 2 pp., May 18, 1975.
- o New England Fisheries Steering Committee, resource report letter, 1 p., 8 pp. attachment, May 8, 1975.
- o The Commonwealth of Massachusetts, Executive Office for Environmental Affairs, resource report letter, 1 p., 15 pp. attachment, August 18, 1975.

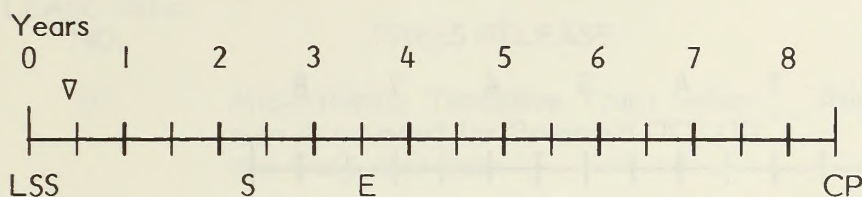
LEASE SALE NO. 43

- o U.S. Geological Survey, Open-File Report 75-411, 262 pp., 1975.
- o Bureau of Mines, resource report letter, 2 pp., 1975.
- o Bureau of Outdoor Recreation, resource report letter, 1 p., 1975.
- o U.S. Fish and Wildlife Service, resource report letter, 3 pp., July 8, 1975.
- o Department of Defense, Office of the Assistant Secretary, resource report letter, 2 pp., 12 pp. attachments, July 29, 1975.
- o Environmental Protection Agency, resource report letter, 5 pp., 1975.
- o National Aeronautics and Space Administration, resource report letter, 2 pp., March 11, 1976.
- o National Oceanic and Atmospheric Administration, resource report letter, 2 pp., 31 pp. attachment, 1975.
- o National Park Service, resource report letter, 1 p., July 1, 1975.
- o Department of Transportation, resource report letter, 5 pp., July 21, 1975.
- o Federal Energy Administration, resource report letter, 2 pp., July 17, 1975.
- o Department of Treasury, resource report letter, 10 pp., May 28, 1975.

LEASE SALE NO. 49

- o U.S. Geological Survey, Open-File Report 76-532, 26 pp., 1976.
- o Department of Defense, Office of the Assistant Secretary, resource report letter, 4 pp., 2 attachments, July 14, 1976.
- o Environmental Protection Agency, resource report letter, 3 pp., attachment, July 15, 1976.
- o National Aeronautics and Space Administration, resource report letter, 3 pp., June 16, 1976.
- o National Oceanic and Atmospheric Administration, resource report letter, 3 pp., attachments, July 1, 1976.
- o National Park Service, resource report letter, 1 p., June 25, 1976.
- o Department of Transportation, resource report letter, 6 pp., attachments, July 1, 1976.
- o Federal Power Commission, resource report letter, 2 pp., attachments, May 3, 1976.
- o Federal Energy Administration, resource report letter, 1 p., June 30, 1976.
- o Department of Treasury, resource report letter, 2 pp., May 6, 1976.

CALL FOR NOMINATIONS AND COMMENTS (Figure 5, Step 2b)



Description

The Call for Nominations and Comments is published in the *Federal Register* to solicit input from interested parties on which tracts should be recommended for or deleted from leasing consideration. Governors of affected states are also notified of the Call via personal letter, requesting them to identify specific goals and policies which they believe should be considered. Any Governor of an affected state or the executive of any local government may submit recommendations to the Secretary. The Secretary also considers suggestions from other Federal agencies, industry, all interested parties and the general public.

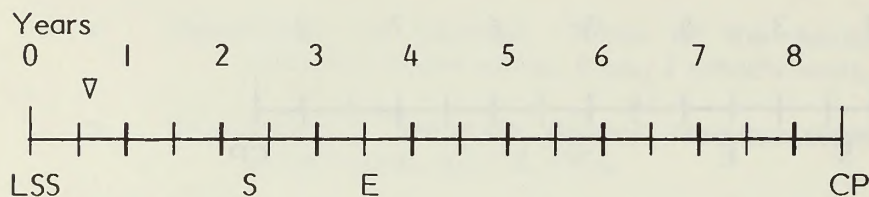
The Call covers large contiguous areas, usually embracing several million acres offshore, and is usually published 60 to 120 days prior to tentative tract selection. Specific information bearing upon potential leasing and development in an area includes geological, geophysical, environmental, biological and socioeconomic factors. A call for nominations and comments is an information gathering component of the Department's leasing procedure and does not commit it to leasing within the area of the call.

General information and comments are filed with the Resource Reports and are available for public examination at the appropriate OCS office listed in the introduction. However, tract specific nominations are considered to be proprietary and are not available for public review prior to a lease sale. The Calls for Nominations and Comments are published in the *Federal Register* as shown below.

Documents

LEASE SALE NO.	FEDERAL REGISTER		DATE
	VOL.	NO.	
40	40	59	March 25, 1975
42	40	117	June 17, 1975
43	40	178	September 12, 1975
49	41	226	November 23, 1976
52	43	248	December 26, 1978

TENTATIVE TRACT SELECTION NOTICE AND STATE NOTIFICATION (Figure 5, Step 2c)



Description

At least 60 days after the Call for Nominations, specific tracts are selected for further analyses for possible lease offering. The Bureau of Land Management, Geological Survey, other Department of Interior bureaus and Federal agencies, affected states and local agencies participate in the tract selection process. The responsibility of the Bureau of Land Management involves an evaluation of: (1) the number of nominations per tract, nomination patterns and tract leasing history; (2) environmental conditions to be considered, including tracts deleted from previous sales for environmental or other reasons and tracts for which special environmental stipulations may be necessary; (3) comments or recommendations received from Federal, state and local governmental agencies, interest groups, or the public; (4) other uses of the area proposed for leasing and (5) review of technical data.

The Geological Survey's responsibility involves a technical evaluation to identify those tracts which are prospective sources of hydrocarbons. The Fish and Wildlife Service provides additional support throughout the process. Based on the agency analyses, a joint Bureau of Land Management-Geological Survey field office tentative tract selection recommendation is made. The Washington headquarters offices of the Bureau of Land Management, Geological Survey and Fish and Wildlife Service review the joint field report and any appropriate additional information and prepare a recommendation for tentative tract selection, which is then formally transmitted to the Secretary of the Interior for approval. Announcement of the tentative tract selection is made by telegrams to Governors of the affected states and by press release to the general public from the Department.

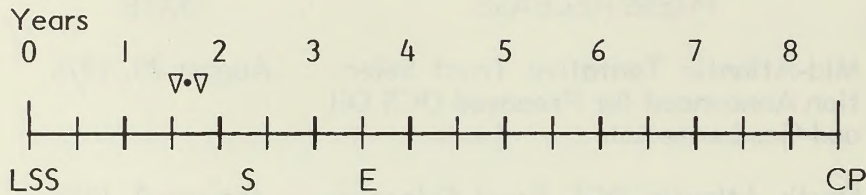
Information regarding availability and cost of these documents can be obtained from regional Bureau of Land Management OCS Offices listed in the Introduction (p. 2).

Documents

LEASE SALE NO.	PRESS RELEASE	DATE
40	Mid-Atlantic Tentative Tract Selection Announced for Proposed OCS Oil and Gas Lease Sale	August 20, 1975
42	North Atlantic OCS Tract Selection for the Proposed Oil and Gas Lease Sale No. 42	January 2, 1976
43	Interior Makes Tract List Available for Possible Offshore Sale (OCS Sale No. 43) in South Atlantic, April 27, 1976	November 7, 1975
49	Interior Makes Tract List Available for Possible Mid-Atlantic Offshore Sale	September 23, 1977

LEASE SALE NO.	STATE NOTIFICATION	DATE
40	New Jersey Maryland Delaware New York Virginia	August 15, 1975
42	Massachusetts Connecticut New Hampshire Rhode Island Maine New York	December 10, 1975
43	North Carolina Florida Georgia South Carolina	April 22, 1976
49	New York Virginia Maryland Delaware New Jersey	November 5, 1976

PRE-SALE ENVIRONMENTAL IMPACT STATEMENT (Figure 5, Steps 3a and 3c)



Description

Environmental Impact Statements (EIS's) are mandated by the National Environmental Policy Act (NEPA) of 1969, particularly subsection 102(2)(C), which requires detailed EIS's for major Federal actions significantly affecting the quality of the human environment. The Bureau of Land Management is responsible for EIS preparation prior to a lease sale. In general, a draft EIS is prepared, which describes the existing environment, the proposed action and the probable environmental impacts. Mitigating measures, unavoidable adverse impacts, cumulative effects and irreversible and irretrievable commitment of resources are analyzed along with possible alternatives to the proposed action. The draft EIS is then published for Federal, state and public review and comment. A public hearing(s) may be held to solicit comments on the draft EIS. After the comments are assessed, a final EIS is prepared, which incorporates substantive comments, findings and recommendations. The document is then submitted to the U.S. Environmental Protection Agency and made available to the general public.

The final EIS's in the Atlantic Area may be examined at the OCS offices listed below, or at the designated Federal Depository Libraries (listed in Appendix A) in each affected state.

Area: Maine to Virginia

New York OCS Office,
Bureau of Land Management
Suite 32-120, 26 Federal Plaza
New York, NY 10007

(212) 264-2960

Area: North Carolina to Florida

New Orleans OCS Office,
Bureau of Land Management
Hale Boggs Federal Building
500 Camp Street, Suite 841
New Orleans, LA 70130

(504) 589-6541

Information regarding availability and/or cost of these documents can be obtained by contacting the offices shown above.

Documents

LEASE SALE NO. 40

Title: Final environmental statement: proposed 1976 OCS oil and gas lease sale offshore the mid-Atlantic states, OCS Sale No. 40, May 26, 1976, 4 vols., 2,000 pp., appendices, visuals

Author and/or Agency: Bureau of Land Management

LEASE SALE NO. 42

Title: Final environmental impact statement: proposed 1977 OCS oil and gas lease sale offshore the north Atlantic states, OCS Sale No. 42, August 30, 1977, 5 vols., 1,683 pp., appendices, visuals

Author and/or Agency: Bureau of Land Management

LEASE SALE NO. 43

Title: Final environmental impact statement proposed 1978 OCS oil and gas lease sale south Atlantic, OCS Sale No. 43, October 31, 1977, 3 vols., 488 pp., appendices, visuals

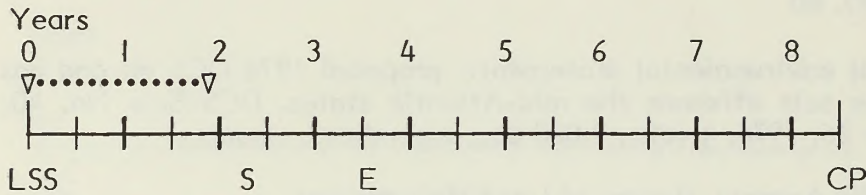
Author and/or Agency: Bureau of Land Management

LEASE SALE NO. 49

Title: Final environmental impact statement: proposed 1979 OCS oil and gas lease sale offshore the mid-Atlantic states, OCS Sale No. 49, September 29, 1978, 811 pp., 3 vols., appendices, visuals

Author and/or Agency: Bureau of Land Management

HAZARDS REPORT (Figure 5, Step 3b)



Description

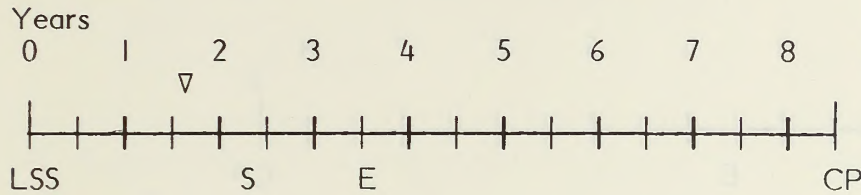
As noted on the time marker, hazard report preparation is a relatively long term pre-sale activity, which requires approximately two years. Once tracts are announced for an OCS lease sale, the Geological Survey begins to gather potential geologic hazards information for each tract. Effects of geologic processes such as surface stability, shallow gas, deep geopressures, active faulting and seismicity are analyzed and submitted to the Bureau of Land Management for inclusion in the final EIS at least 60 days prior to publication of the EIS. On the basis of this report, tracts with known hazards that cannot be mitigated are deleted from the proposed lease sale; other tracts with known hazards may be included with stipulations on how they may be developed. The hazards reports are subsequently published as Open File Reports by the Geological Survey.

Hazards reports for the Atlantic Region Lease Sales 40, 42 and 43 are in preparation as Open File Reports at the Branch of Distribution, U.S. Geological Survey, Box 25286, Federal Center, Denver, Colorado, 80226, (303) 234-5888. The hazards report for Lease Sale 49 is available at the above address.

Documents

LEASE SALE NO.	PAGES	AVAILABILITY
40	100-300	In process
42	100-300	In process
43	100-300	In process
49	100-300	February 26, 1979

SECRETARIAL ISSUE DOCUMENT (Figure 5, Step 4a)



Description

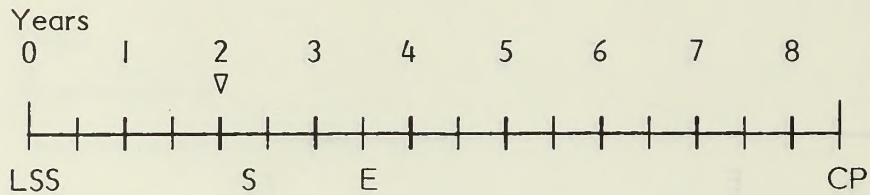
At the time the final EIS is being prepared, a Secretarial Issue Document (SID), formerly called the Program Decision Option Document, is also prepared. The SID brings to the decisionmaker's attention all factors associated with the proposed action. These include environmental and physical factors and other issues including potential economic and social impacts of the proposal and its effect on the Department's programs. The SID and the final EIS provide the information necessary to enable the Secretary to make a decision on various sale options, including whether or not to hold a lease sale.

SID's for the Atlantic Area are available subject to the Secretary's decision on each sale, at the appropriate regional Bureau of Land Management OCS Office listed in the Introduction (p. 2).

Documents

LEASE SALE NO.	PAGES	DATE
40	21 44 appendices	June 1976
42	65 83 appendix and additions	September 26, 1977
43	33	November 22, 1977
49	25 appendix	October 30, 1978

PROPOSED NOTICE OF SALE (Figure 5, Step 4b)



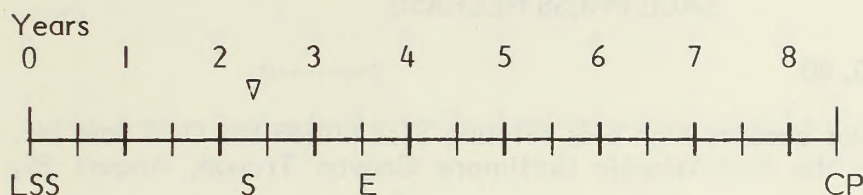
Description

Following a tentative decision by the Secretary to proceed, the proposed notice of sale is published in the *Federal Register* and sent to the Governors of the affected states. The notice contains the proposed listing of tracts and allows 60 days for replies on the tracts recommended for sale. Governors' replies and state and local comments, if any, may be reviewed at the appropriate OCS office, and the sale notices are published in the *Federal Register* as shown below.

Documents

LEASE SALE NO.	FEDERAL REGISTER VOL.	NO.	DATE
42	42	199	October 14, 1977
43	42	240	December 14, 1977
49	43	223	November 17, 1978

SALE (Figure 5, Steps 5a and 5b)



Description

Following a 60-day comment period on the proposed lease sale, a final sale decision meeting is held to determine the tracts to be offered for sale, method of bidding, lease stipulations and all terms and conditions of the sale. This information is then published as a Public Notice of Sale in the *Federal Register* as shown below with details for date, time and place for bid submission and opening.

Interested parties submit bids to the Bureau of Land Management, which, with the assistance of the geologic and economic evaluation by the Geological Survey, conducts a review of the high bids to determine whether the particular bids should be recommended for acceptance or rejection. The primary emphasis in the post sale analysis is to determine if the high bids on each tract represent a fair return along with a review for fair competition. The final decision on lease sale award or rejection is announced by a press release from the Department of the Interior, and may be examined at the regional OCS offices listed in the Introduction (p. 2), or copies may be obtained from Mr. Jim Robinson, Public Information Specialist, U.S. DOI, Bureau of Land Management, 130 18th and C Streets, NW, Washington, D.C. 20240, (202) 343-5717.

Documents

LEASE SALE NO.	FEDERAL REGISTER		DATE
	VOL.	NO.	
40	41	138	July 16, 1976
42	42	251	December 30, 1977
43	43	36	February 22, 1978
49	44	20	January 29, 1979

Documents (continued)

SALE PRESS RELEASE

LEASE SALE NO. 40

Title: Interior accepts high bids totaling \$1.1 billion for OCS Sale No. 40 in the Mid-Atlantic Baltimore Canyon Trough, August 25, 1976.

LEASE SALE NO. 42

Title: None prepared due to delay of the lease sale.

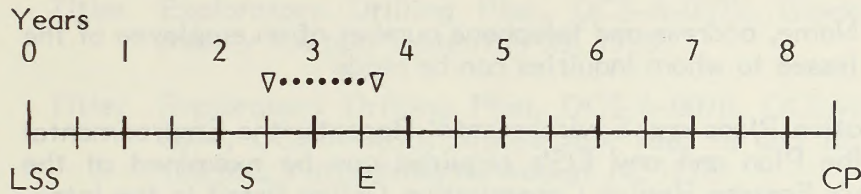
LEASE SALE NO. 43

Title: Interior accepts bids totaling \$100,743,443 for South Atlantic OCS oil and gas lease sale, April 13, 1978.

LEASE SALE NO. 49

Title: Interior accepts bids totaling \$40,001,361 for mid-Atlantic OCS Sale No. 49, March 27, 1979.

EXPLORATION PLAN AND ENVIRONMENTAL REPORT (Figure 6, Step 1a)



Description

The Exploration Plan provides for effective and environmentally sound exploration activities and is submitted by the lessee along with an Environmental Report to the Geological Survey. The Geological Survey provides each affected state with copies of the plan and report. The Plan and Environmental Report must be approved by the Survey prior to exploration activities in the OCS.

The Exploration Plan includes:

- o Type and sequence of exploration activities and tentative timetable of activities
- o Descriptions of drilling vessels, platforms or other offshore structures, and features such as safety and pollution prevention and control measures
- o Geophysical equipment to be used
- o Approximate location of each well

The Environmental Report for exploration contains:

- o Description of the affected ocean area
- o Description of environmentally sensitive areas
- o Procedures for oil or waste spill prevention and clean-up
- o Onshore support facilities
- o Personnel requirements
- o Travel routes and transport operations
- o Demands and impacts on offshore and onshore environments

- o The lessee's statement of consistency with applicable state approved coastal zone management programs
- o Name, address and telephone number of an employee of the lessee to whom inquiries can be made

The Exploration Plans and Environmental Reports, the Environmental Assessments of the Plan and any EIS's required can be examined at the Geological Survey's Eastern Region Conservation Office listed in the Introduction (p. 2).

Documents

LEASE SALE NO. 40

Lessee: Chevron Oil Company

Title: Exploration Drilling Plan, OCS-A-0001, OCS-A-0002, OCS-A-0003, Blocks 412, 454 and 455, approximately 50 pp. plus appendix and attachments, October 23, 1978.

Title: Exploration Plan, OCS-A-0005, OCS-A-0014, OCS-A-0016, Blocks 457, 543 and 545, July 19, 1978.

Title: Exploration Plan, OCS-A-0063, OCS-A-0072, OCS-A-0080, Blocks 900, 987 and 105, October 19, 1978.

Lessee: Conoco Company

Title: Exploratory Plan, OCS-A-0033, Block 633, 100 pp., October 13, 1977.

Lessee: Exxon

Title: Exploratory Drilling Plan, OCS-A-0073, Block 988, 70 pp., November 2, 1977.

Title: Exploration Plan, OCS-A- , Blocks 596, 597, 599, 640, 641, 643, 683, 684, 685, 727, 728, 729, January 14, 1979.

Lessee: Gulf

Title: Exploratory Plan, OCS-A-0059, Block 857, approximately 150 pp. plus 9 exhibits, December 2, 1977.

Lessee: Houston Oil and Minerals Corporation

Title: Exploratory Plan, OCS-A-0042, OCS-A-0050, Blocks 676, 720, April 28, 1978.

Lessee: Mobil Exploration and Production Services, Inc.

Title: Exploratory Drilling Plan, OCS-A-0098, Block 274, approximately 100 pp., September 29, 1978.

Title: Exploratory Drilling Plan, OCS-A-0070, OCS-A-0071, OCS-A-0074, OCS-A-0075, Blocks 985, 986, 16 and 17, approximately 100 pp., 5 attachments, August 14, 1978.

Lessee: Murphy Oil Company

Title: Exploratory Drilling Plan, OCS-A-0062, OCS-A-0076, OCS-A-0078, OCS-A-0079, OCS-A-0081, OCS-A-0040, OCS-A-0018, OCS-A-0054, Blocks 899, 18, 61, 62, 106, 674, 554, 813, approximately 125 pp., July 15, 1977.

Lessee: Shell Oil Company

Title: Exploratory Plan, OCS-A-0096, OCS-A-0097, Blocks 272, 273, approximately 300 pp., March 17, 1977.

Lessee: Tenneco Oil Company

Title: Exploratory Plan, OCS-A-0038, Block 642, approximately 150 pp., September 1, 1978.

Title: Exploratory Plan, OCS-A-0092, Block 230, approximately 150 pp., September 8, 1978.

Lessee: Texaco

Title: Exploratory Drilling Plan, OCS-A-0028, Block 598, 120 pp., May 18, 1977.

Title: Exploration Drilling Plan, OCS-A-0099, Block 275, 50 pp. plus appendix and 3 attachments, May 2, 1978.

LEASE SALE NO. 42

To date, none prepared due to delay of the sale.

LEASE SALE NO. 43

Lessee: Getty Oil Company

Title: Exploration Plan, OCS-G-3663, 3664, Blocks 912, 913, February 22, 1979.

Title: Exploration Plan, OCS-G-3672, 3673, Blocks 25, 26, February 22, 1979.

Title: Exploration Plan, OCS-G-3681, Block 122, October 18, 1978.

Lessee: Tenneco Oil Company

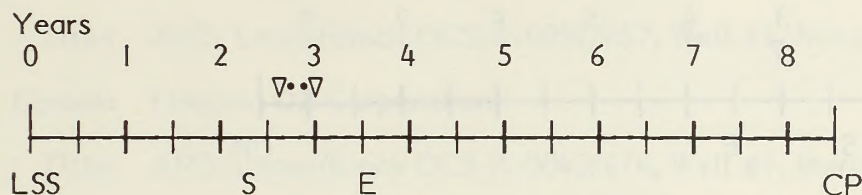
Title: Exploration Plan, OCS-G-3675, Block 427, October 30, 1978.

Title: Exploration Plan, OCS-G-3686, 3689, Blocks 208, 252, September 20, 1978.

LEASE SALE NO. 49

To date, none received.

ENVIRONMENTAL ASSESSMENT AND ENVIRONMENTAL IMPACT STATEMENT (If Necessary) FOR EXPLORATION (Figure 6, Step 2b)



Description

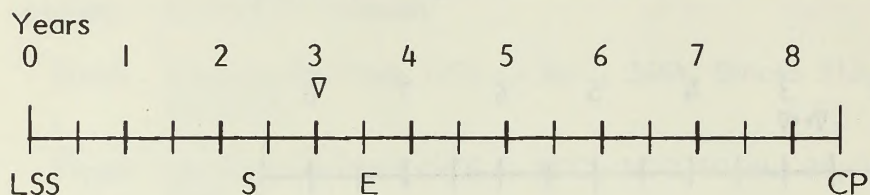
An Environmental Assessment is prepared by the Geological Survey based on the information in the Exploratory Drilling Plan and Environmental Report and information from other existing sources as well as input from the affected states and other Federal agencies. Should the Environmental Assessment indicate that approval of a plan does not significantly affect the human environment, an EIS would not be required. If the Environmental Assessment indicates that approval of the plan would significantly affect the human environment, an EIS must be prepared (refer to the previous description of the EIS process).

States with an approved Coastal Zone Management (CZM) plan are requested to make a consistency determination in accordance with provisions of the Coastal Zone Management Act of 1972, as amended (16 USC 1451 et seq.). On the basis of the Environmental Assessment or EIS findings and the state(s) consistency certification, the plan will be approved, disapproved or modified as appropriate. If approved, applications to drill are submitted to GS for approval.

Documents

To date, no Exploration Plan EIS has been required in the Atlantic Area.

DRILLING PERMIT FOR EXPLORATION (Figure 6, Step 1c)



Description

The Application for Permit to Drill is approved by the Geological Survey after review and approval of the Exploration Plan and Environmental Report or EIS. Availability and cost information of these documents can be obtained at the Public Information Office, U.S. Geological Survey, 1725 K Street, Suite 204, Washington, D.C. 20006, (202) 634-6616.

Other permits required prior to exploratory drilling include Permits for Aids to Navigation from the U.S. Coast Guard, Navigation Permits from the U.S. Army Corps of Engineers, National Pollutant Discharge Elimination System permits from the U.S. Environmental Protection Agency, and consistency determination from states with approved Coastal Zone management plans.

Documents

LEASE SALE NO. 40

Lessee: Conoco Oil Company

Title: APD, Lease/Block OCS-A-0024/590, Well #1, December 29, 1977.

Lessee: Exxon

Title: APD, Lease/Block OCS-A-0046/684, Well #1, November 9, 1977.

Title: APD, Lease/Block OCS-A-0046/684, Well #2, August 14, 1978.

Title: APD, Lease/Block OCS-A-0065/902, Well #1, October 16, 1978.

Title: APD, Lease/Block OCS-A-0055/816, Well #1, January 12, 1978.

Lessee: Gulf Oil Company

Title: APD, Lease/Block OCS-A-0048/718, Well #1, March 9, 1977.

Title: APD, Lease/Block OCS-A-0059/857, Well #1, March 9, 1978.

Lessee: Houston Oil Corporation

Title: APD, Lease/Block OCS-A-0042/676, Well #1, March 27, 1978.

Title: APD, Lease/Block OCS-A-0101/277, Well #1, January 25, 1979.

Title: APD, Lease/Block OCS-A-0037/855, Well #1, September 11, 1978.

Lessee: Shell Oil Company

Title: APD, Lease/Block OCS-A-0096/272, Well #1, January 16, 1979.

Title: APD, Soil Boring, Lease/Block OCS-A-0096/272, January 26, 1978.

Title: APD, Lease/Block OCS-A-0032/632, Well #1, March 31, 1978.

Title: APD, Lease/Block OCS-A-0097/273, Well #1, November 6, 1978.

Lessee: Tenneco Oil Company

Title: APD, Lease/Block OCS-A-0038/642, Well #2, December 19, 1978.

Lessee: Texaco Oil Company

Title: APD, Lease/Block OCS-A-0028/598, Well #1, March 31, 1978.

Title: APD, Lease/Block OCS-A-0028/598, Well #2, August 29, 1978.

Title: APD, Soil Boring, Lease/Block OCS-A-0028/598, March 31, 1978.

Title: APD, Lease/Block OCS-A-0038/642, Well #1, January 10, 1979.

LEASE SALE NO. 42

To date, none prepared due to delay of the sale.

LEASE SALE NO. 43

Lessee: Getty Oil Company

Title: APD, Lease/Block OCS-G-3663/912, Wells 1 through 3, November 16, 1978.

Title: APD, Lease/Block OCS-G-3664/913, Wells 1 through 7, November 16, 1978.

Title: APD, Lease/Block OCS-G-3672/25, Wells 1 through 4, November 16, 1978.

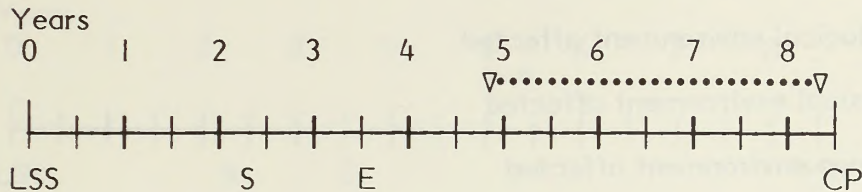
Title: APD, Block/Lease OCS-G-3673/26, Wells 1 through 3, November 16, 1978.

Title: APD, Block/Lease OCS-G-3681/122, Wells 1 through 5, October 6, 1978.

LEASE SALE NO. 49

To date, none received.

DEVELOPMENT AND PRODUCTION PLAN AND ENVIRONMENTAL REPORT (Figure 6, Step 2a)



Description

This Development and Production Plan identifies and describes all development and production activities planned by a lessee in a specific lease area for a specific period of time. It is prepared by the lessee and submitted to the Geological Survey. The Development and Production Plan includes:

- o A description of the activities to be performed
- o Proposed schedule for development and production
- o Descriptions of drilling vessels, platforms, and other offshore structures, their locations and safety and pollution control features.
- o Approximate well location
- o Current interpretations of geological and geophysical data (proprietary information)*
- o Safety standards to be met and implementation procedures

The lessee also submits an Environmental Report (ER) with the Development and Production Plan. This document analyzes the impacts that may occur as a result of the implementation of the proposed plan. Both offshore and onshore facilities and operations are analyzed. Pertinent information includes, but is not limited to:

- o Acreage requirements
- o Transportation routes

*This information is proprietary and will be released by the Department according to the time frames specified in 30 CFR 251.

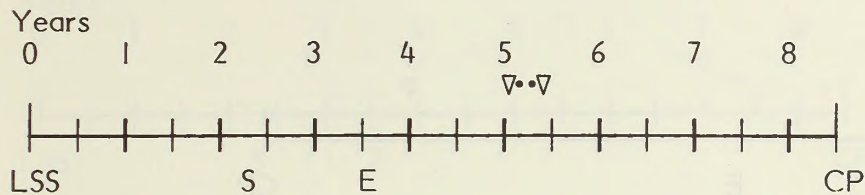
- o Pollutants generated
- o Resource requirements
- o Biological environment affected
- o Physical environment affected
- o Human environment affected
- o Contingency plans and equipment

The Development and Production Plan and Environmental Report for the Plan are provided to the states, along with the consistency certification for states with an approved CZM plan, for comments and consistency determination.

Documents

To date, none have been received for the Atlantic Area.

**ENVIRONMENTAL ASSESSMENT AND IMPACT STATEMENT (If Necessary)
FOR DEVELOPMENT AND PRODUCTION (Figure 6, Step 2b)**



Description

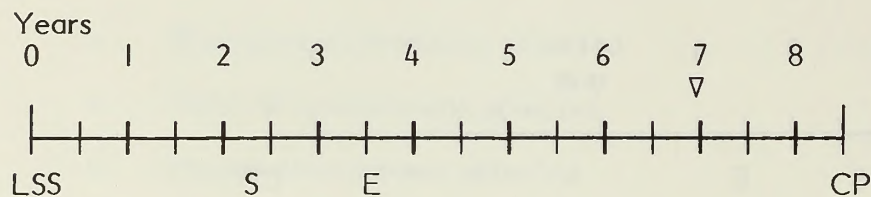
Geological Survey prepares an Environmental Assessment (EA) for the proposed Development and Production Plan. If the EA indicates that approval of the plan does not significantly affect the human environment, then no EIS is required and the plan is approved. If approved, applications to install platforms, pipelines, aids to navigation, as well as permits for navigation, utilizing permits for each well and NPDES permits are submitted to the appropriate Federal agencies for approval.

However, if the EA indicates that approval of the plan could significantly affect the environment, an EIS must be prepared. In addition, the OCS Lands Act Amendments of 1978 require that at least one development and production EIS be required at least once in any area or region of the OCS except the Gulf of Mexico. This declaration will necessitate the preparation of an EIS that incorporates the maximum amount of information about industry's intentions for that OCS area and the possible impacts that may result.

Documents

OCS activities in the Atlantic Area have not passed the exploration stage and, therefore, no development and production documents have been prepared to date.

DRILLING PERMIT FOR DEVELOPMENT AND PRODUCTION (Figure 6, Step 2c)



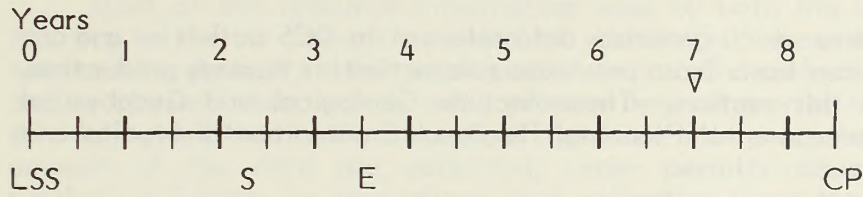
Description

The Application for Permit is approved by the Geological Survey after review and approval of the proposed Development and Production Plan.

Documents

To date, none have been received for the Atlantic Area.

PIPELINE PERMIT (Figure 6, Step 2d)



Description

Pipeline permit applications are reviewed by a number of agencies, depending on the purpose of the pipeline, the mineral resource being transported, the method of transport and the onshore facilities required. The Department of Transportation's Materials Transportation Board is responsible for issuing regulations for pipelines on the OCS; the Bureau of Land Management grants rights-of-way for pipelines across the OCS, while Geological Survey grants rights of use and easements. In addition, the U.S. Army Corps of Engineers issues permits for construction of pipelines in navigable waters, the Fish and Wildlife Service reviews all pipeline applications and state and local agencies are responsible for regulation of pipelines in state waters.

Documents

To date, none have been received for the Atlantic Area.

OTHER DOCUMENTATION

Four programs which generate data relevant to OCS activities and are used on a continuous basis from pre-lease sale activities through production, are presented in this section. These include Geological and Geophysical Analysis, Intergovernmental Planning, Regional Environmental Studies and Summary Reports.

Description

Platone permit applications are reviewed by a panel of experts... The Department of Transportation's Marine Transportation System... Land Management grants... Geological Survey grants... Army Corps of Engineers... navigable waters... that the state and local agencies are responsible for regulation of activities in state waters.

Documents

To date, none have been received for the Atlantic Area.

GEOLOGICAL AND GEOPHYSICAL ANALYSIS

Most of the resource information used by both the Government and industry on the oil and gas potential of various OCS areas is based on data obtained by geological and geophysical surveys. The collection of geological and geophysical data is a dynamic process beginning prior to the lease sale scheduling and continuing throughout the lease sale process. A considerable amount of the data are collected, under permits issued by the U.S. Geological Survey, by specialized data collection firms that sell or furnish the information to oil companies and the Department.

Seismic surveys are the principal geophysical technique employed by oil companies and private contractors for identification of hydrocarbon reservoirs in areas that may be proposed for lease sale. Geological testing techniques include bottom sampling, shallow coring and deep stratigraphic testing. The latter technique is often a final step in pre-sale geologic exploration. This drilling is referred to as a Continental Offshore Stratigraphic Test (C.O.S.T.) well and is used to determine the hydrocarbon potential of the rock.

The presence and quality of source rocks and reservoir rocks are determined together with the age of the rocks, environment during formation and other relevant characteristics which indicate the hydrocarbon potential of the area. Five C.O.S.T. wells have been drilled in the Atlantic Area by various groups of oil companies. Two are in the Baltimore Canyon Trough, two in the Georges Bank area and one in the Southeast Georgia Embayment.

The Geological Survey also gathers pre-sale information through in-house activities and from industry. Although the data are first used in Geological Survey tract selection, both industry and the Department use such information to nominate tracts for lease sale, and the Geological Survey continuously gathers, analyzes and uses the geological and geophysical data for lease management.

All geological and geophysical data collected by industry and requested by the U.S. Geological Survey are submitted to the Director on a confidential or proprietary basis. Under certain conditions, proprietary data would be made available as outlined in the following. Under 30 CFR 251.14 (effective January 23, 1976, changes proposed February 9, 1979), geological data on hydrocarbon showing any environmental hazards on unleased lands discovered during drilling will be released immediately. All other geological data except for deep stratigraphic data will be released ten years after issuance of permits, while deep stratigraphic test results are released five years after completion of the test well or sixty days after issuance of a lease within fifty miles.

Data collected under lease operations by a lessee will be proprietary under the terms of 30 CFR 250.97 (effective June 23, 1976, changes proposed February 17, 1979). Geological data and analyzed information will remain proprietary as long as the lease remains in effect or for two years after the date of submission, whichever is less. Geophysical data and interpreted information will remain proprietary for the duration of the lease or ten years, whichever is less. Proposed changes would exclude high resolution geophysical data from being proprietary.

Finally, data purchased by exclusive contract is non-proprietary while data purchased by contract will be proprietary according to the terms of the contract.

Except for proprietary data which would compromise the competitive position of any party participating in data collection or other lease sale activities, the raw data is available on magnetic tapes and/or microfiche from the National Geophysical and Solar-Terrestrial Data Center, NOAA/EDIS/NGSDC, Code D621, Boulder, Colorado 80303, (303) 499-1000. Information regarding availability and cost of the tapes and documents can be obtained from the above address.

INTERGOVERNMENTAL PLANNING PROGRAM

Description

The Intergovernmental Planning Program for OCS Oil and Gas Leasing, Transportation and Related Facilities (IPP) will provide a formal coordination and planning mechanism for three major OCS program elements administered by the Bureau of Land Management: (1) the leasing process, (2) the Environmental Studies Program and (3) Transportation Planning for OCS oil and gas. The IPP establishes, in each of the six leasing areas, a Regional Technical Working Group Committee and, if a marketable discovery is made, a State Technical Working Group Subcommittee.* The State Technical Working Group Subcommittees will prepare the site-specific studies plan and the Transportation Management Plan.

A Transportation Management Plan will be developed for each OCS region and, at a minimum, will be composed of recommendations of State Technical Working Groups concerning the following elements:

- (1) Analysis and recommendation for discrete corridors and alternatives, which will include all transportation routes to onshore facilities or to offshore terminals serving as a collection point for more than one production area;
- (2) Identification of environmentally sound alternative areas for the location of onshore facilities;
- (3) Any alternatives regarding surface vessel transportation (in accordance with appropriate regulatory agencies);
- (4) A plan for monitoring of construction and operations and any following-up studies which may be required and
- (5) Any stipulations and use restrictions identified as applicable to rights-of-way.

*State Technical Working Groups will be composed of representatives of the affected states in each OCS Area, Bureau of Land Management, the U.S. Fish and Wildlife Service, U.S. Coast Guard, U.S. Geological Survey, the U.S. Environmental Protection Agency, the National Oceanic and Atmospheric Administration, industry and members of special and private interest groups.

No Transportation Plans have been formalized for the Atlantic Area although preliminary planning is underway.

Documents

To date, none have been prepared for the Atlantic Area.

- (1) Analysis and evaluation of the potential for... facilities or to effect... for more than one protection...
- (2) Identification of... location of... facilities
- (3) Any alternative... accordance with... facilities
- (4) A plan for... facilities
- (5) Any... facilities

REGIONAL ENVIRONMENTAL STUDIES PLANS

Description*

Regional Environmental Studies Plans are part of a National Environmental Study Program administered by the Bureau of Land Management and designed to provide the environmental information required to make decisions at the various steps in the leasing process. The strategy of the National Program is to identify imminent and long term information needs well before leasing activity begins and developing studies that address specific regional concerns and generic, OCS-wide problems. Regional Environmental Studies Plans are the tools that implement this strategy. Regional issues are identified via public participation at least a year before any lease sale activity is begun, and studies are designed for these issues. Regional Studies Plans from the various regions are then used to build budget requests and to allocate appropriated funds across regions. The final Regional Studies Plans describe the present status of OCS oil and gas activity in the region, issues of local and National importance and the timing of information needs relative to decision points and the studies proposed to answer these needs.

As shown in Figures 5 and 6 of this Index, information contained in the documents is gathered at the onset of the OCS process, first considered during tract selection, and is part of an ongoing program in which new data are continually made available for decisionmaking in the OCS regions.

Documents

NORTH ATLANTIC

o **A regional studies plan for the North and Mid-Atlantic Regions for FY 1979-FY 1981**, Bureau of Land Management, New York OCS Office, September 1978. Available for examination at the New York OCS Office, Bureau of Land Management, Suite 32-120, 26 Federal Plaza, New York, NY 10007.

The generic relationships between OCS activities and potential impacts in the North and Mid-Atlantic are outlined. The overall timing of activities, probable ensuing impacts, relevant technologies and management approaches are presented. In addition, a summary of previous and current OCS studies, and the overall program format are directed toward meeting the information needs of decisionmakers in the region.

*A revision of the Regional Environmental Studies Program is currently underway, and will be available for the next Index update.

o **A socioeconomic and environmental inventory of the North Atlantic Region from Sandy Hook, New Jersey to the Bay of Fundy**, The Research Institute of the Gulf of Maine (TRIGOM), South Portland, Maine, November 1974, 4,900 pp., 3 volumes (8 books and index). Available for review at the New York OCS Office, Bureau of Land Management, Suite 32-120, 26 Federal Plaza, New York, NY 10007.

These documents are a compilation of literature pertaining to the North Atlantic Region, between New Jersey and Canada. Specific topics presented include environmental issues, system and habitat ecology, unique environments, endangered species and socioeconomic studies.

o **Effects of the Tamano spill on the marine environment**, Mayo, D., and D. Page, Bowdoin College, Brunswick, Maine, and E. Gilfillan, Bigelow Laboratory, West Boothbay Harbor, Maine, 1975, 139 pp. Available for review at the New York OCS Office, Bureau of Land Management, Suite 32-120, 26 Federal Plaza, New York, NY 10007.

This report describes the effects of the Tamano oil spill in Casco Bay, Maine on the soft shell clam *Mya arenaria*. A comparison between oil-affected clams and organisms from a clean site in Casco Bay exhibited a 50 percent decrease in growth rate for the affected clams. Carbon flux measurements further indicate that the methods employed in the study are sensitive measures of stress imparted to *Mya arenaria* by low levels of hydrocarbon contamination.

o **Georges Banks Conference - Marine environmental assessment needs on the Georges Bank related to petroleum exploration and development**, New England Natural Resources Center, Boston, Massachusetts. Meeting held at Bentley College, Waltham, Massachusetts, May 20-22, 1975, 155 pp. Available from New England Resources Center, Boston, Massachusetts, c/o Dean, Department of Forestry and Environmental Studies, Yale University, 205 Prospect Street, New Haven, CT 06511, (203) 436-0446.

This document contains the proceedings of the Georges Banks Conference and describes the marine environmental assessment needs related to petroleum exploration and development within the potential outer continental shelf lease sale area. Proceedings of the meeting include the following: summary of available data, prediction of possible effects of drilling on the environment, identification of areas where additional information is needed and suggestions for future programs. The report suggests future environmental analyses that should be undertaken to more adequately determine the interaction of oil and the marine environment, define living systems and characterize geological systems.

o **Economic study of the possible impacts of a Georges Bank sale**, Reinfield, K., F. Callahan, and A. Day, Technical Paper No. 2, Bureau of Land Management, New York Outer Continental Shelf Office, New York, November 1976, 200 pp. Available for review at New York OCS Office, Bureau of Land Management, Suite 32-120, 26 Federal Plaza, New York, NY 10007.

This study concerns the possible onshore economic/air/water quality impacts that the potential leasing of the Georges Bank OCS (lease sale 42) could have on the New England coastal region. The study is based on an application of a multi-regional, multi-industry forecasting model developed by Dr. C. C. Harris, Jr., of the University of Maryland. In conducting the study, hypothetical development/production scenarios are generated for input into the economic model. The model is then used to predict the onshore impacts that might be expected to occur under the assumptions of the scenarios.

o **Environmental consequences of onshore economic activity resulting from offshore oil and gas development in New England**, Narkus-Kramer, M., and A. L. Watson, International Research and Technology, Arlington, Virginia, for Bureau of Land Management, Department of the Interior, 1976, 136 pp., appendices. Available for review at New York OCS Office, Bureau of Land Management, Suite 32-120, 26 Federal Plaza, New York, NY 10007.

This report analyzes the onshore environmental impacts of changes in economic activity resulting from possible oil and gas development off the coast of New England. The analysis is based on three hypothetical scenarios and is carried out on a county-specific basis. Significant, but tolerable, increases in SO_x emissions are expected. Onshore water pollution impacts are estimated to be insignificant; however, nonpoint source pollution inputs were not considered in the analysis.

NORTHERN AND MID-ATLANTIC

o **Summary of environmental information on the continental slope—Canadian/United States Border to Cape Hatteras, North Carolina**, Research Institute of the Gulf of Maine (TRIGOM) Portland, Maine, May 1976, 4 volumes, 1,533 pp., appendices. Available from National Technical Information Service, 5285 Royal Road, Springfield, VA 22161, paper copy \$45.00 (PB-284 000-SET/ST).

This document describes the results of an environmental survey of the mid-Atlantic and north Atlantic region of the outer continental shelf. Included in the description are the area's geologic structure, physical and chemical oceanography and benthic and pelagic biota.

o **A summary of environmental information on the continental shelf from the Bay of Fundy to Cape Hatteras, North Carolina**, Center for Natural Areas, South Gardiner, Maine, December 1977, 3 volumes (5 books), 2,042 pp., bibliography and appendices. Available for review at New York OCS Office, Bureau of Land Management, Suite 32-120, 26 Federal Plaza, New York, NY 10007.

This literature survey covers the 200 to 2000 meter water depth of the outer continental slope from the Gulf of Maine to Cape Hatteras, North Carolina. Major topics included in the report are geology, meteorology, physical oceanography, chemistry and biology. The biological element is further broken down into such areas as microbiology, zooplankton, benthos, sport fisheries, marine mammals, threatened or endangered species and toxicity.

MID-ATLANTIC

o **Environmental consequence of onshore activity in four New Jersey coastal counties resulting from offshore oil development**, Narkus-Kramer, M., S. Ratick, and A. Watson, International Research and Technology, Arlington, Virginia, September 1975, 46 pp. Available from National Technical Information Service, 2585 Royal Road, Springfield, VA 22161, paper copy \$4.00/microfiche \$2.25 (PB-249 349/2GA).

This report documents estimates of the onshore air and water pollution increases that four New Jersey counties could expect from proposed OCS oil and gas development in the mid-Atlantic. These estimates are based on the projections of economic activity for 1975, 1980, 1985 and 1990.

o **A study of the socioeconomic factors relating to the outer continental shelf of the Mid-Atlantic Coast**, College of Marine Studies, University of Delaware, 1974, 1,093 pp., 9 volumes (3 books), bibliography, and appendices. Available for review at the University of Delaware Morris Library, Newark, DE 19711, (303) 738-2965.

A socioeconomic impact study was conducted for the U.S. Mid-Atlantic area that could be affected by oil and gas development on the outer continental shelf. Data files from state and Federal documents are abstracted and methods are suggested for assessment of socioeconomic impacts. Subjects included in the report are target areas, petroleum, industrial-commercial activity, land use, demography and recreation.

o **Marine environmental implications of offshore oil and gas development in the Baltimore Canyon region of the Mid-Atlantic Coast**, Estuarine Research Federation, Wachapreague, Virginia, 1975, 469 pp., appendices. Based on a meeting held at the University of Maryland, College Park, Maryland, December 2-4, 1974. Available from the Estuarine Research Federation, Wachapreague, VA, Publication ERF 75-1, for \$10.00.

The Mid-Atlantic Conference and Workshop included a review of available knowledge of the region, the responsibilities of state and Federal government agencies, and the best approach to baseline and monitoring studies. The major recommendation was for a comprehensive, interdisciplinary study of the region. Other comments concerned the development of a study program which should include a sufficient sample size, standardization of equipment and methods, good data management and analysis of existing published and unpublished data.

o **Economic study of the possible impacts of a potential Baltimore Canyon sale**, Reinfeld, K. D., F. F. Callahan, K. D. Benjamin, and A. B. Miller, Technical Paper Number 1, Bureau of Land Management, New York, Outer Continental Shelf Office, New York, December 1975, 265 pp. Available for review at the New York OCS Office, Bureau of Land Management, Suite 32-120, 26 Federal Plaza, New York, NY 10007.

This study concerns the possible onshore economic impacts due to leasing of the Baltimore Canyon OCS for oil and gas development (lease sale 40) and is based on an application of a multi-regional, multi-industry forecasting model developed by Dr. C. C. Harris, Jr., of the University of Maryland. The study uses a hypothetical but realistic development/production scenario to estimate the onshore impacts that might be expected to result under the conditions of the scenario.

o **Middle Atlantic Outer Continental Shelf environmental studies**, Virginia Institute of Marine Sciences, Gloucester Point, Virginia, and U.S. Geological Survey, Woods Hole, Massachusetts, August 1977, approximately 1,800 pp., 4 volumes, appendices and visuals. Available from National Technical Information Service, 2585 Royal Road, Springfield, VA 22161, set of 4 volumes \$50.00 in paper copy (not available in microfiche) (PB 281295).

The four-volume document is the result of first year chemical, biological and geological baseline studies conducted in the Mid-Atlantic Outer Continental Shelf region. Data suggest that longitudinal distribution patterns of chemical and biological factors across the continental shelf are more distinct than latitudinal patterns. Based upon geological information presented, the report concludes that environmental hazards in the area do not warrant withdrawal of lease tracts in the Mid-Atlantic region. However, the investigators recommend that environmental studies continue in order to increase understanding of this environment.

o **Summarization and interpretation of historical physical oceanographic and meteorological information for the Mid-Atlantic Region**, Williams, R., and F. Godshall, National Oceanic and Atmospheric Administration, Washington, D.C., October 1977, 307 pp. Available from National Technical Information Service, 2585 Royal Road, Springfield, VA 22161, paper copy \$11.75/microfiche \$3.00 (PB-277 104/AS).

The report describes results of an environmental study pertaining to the Mid-Atlantic Outer Continental Shelf region. Oceanographic data include vertical salinity-temperature profiles, Nansen casts, ship-drift observations and current meter records, while meteorological knowledge is mainly based on passing-ship observations. These two sources of information were used to define quality of water masses, circulation patterns, ocean waves, surface wind fields and vertical mixing patterns. However, the report concludes that the available data is insufficient to warrant further development of pollutant trajectory models.

o **Analysis of historical benthic macrofauna data from the Baltimore Canyon Trough**, Radosh, D., A. Frame, T. Wilhelm, and R. Reid, National Marine Fisheries Service, Northeast Fisheries Center, Highlands, New Jersey, September 1978, 118 pp. Available for review at the New York OCS Office, Bureau of Land Management, Suite 32-120, 26 Federal Plaza, New York, NY 10007.

A benthic survey of two potential oil-producing areas in the Baltimore Canyon Trough is presented. Sediments surveyed were medium to fine sands with polychaetes and peracarid crustaceans the dominant faunal species. The apparent temporal stability of these organisms make them useful in detecting oil-related impacts.

SOUTH ATLANTIC

o **A regional studies plan for the Gulf of Mexico and South Atlantic**, Bureau of Land Management, New Orleans OCS Office, October 1, 1978, 271 pp. Available for examination at the New York OCS Office, Suite 32-120, 26 Federal Plaza, New York, NY 10007.

The generic relationships between OCS activities and potential impacts in the Gulf of Mexico and South Atlantic are outlined. The management steps, probable ensuing impacts, relevant technologies and management approaches are presented. In addition, a summary of previous and current OCS studies, and the overall program format are directed toward providing answers for decisionmaking in the region.

o **A socioeconomic and environmental baseline summary for the South Atlantic region between Cape Hatteras, North Carolina, and Cape Canaveral, Florida**, Virginia Institute of Marine Science, Gloucester Point, Virginia, September 1974, 1629 pp., 5 volumes, appendix. Available for review at the New Orleans OCS Office, Bureau of Land Management, 1001 Howard Avenue, New Orleans, LA 70113.

This five-volume document is a literature survey of the South Atlantic region, which encompasses the area between North Carolina and Florida. Physical oceanography, climatology, chemical and biological oceanography, geological oceanography and a socioeconomic inventory are included in the report.

o Bureau of Land Management's Environmental Studies Program for the South Atlantic Outer Continental Shelf Area, Conference/Workshop Proceedings, Research Triangle Institute, Research Triangle Park, North Carolina, February 1976, 283 pp. Based on a meeting held at Skidaway Institute of Oceanography, Savannah, Georgia, October 14-17, 1975. Available for review at New Orleans OCS Office, Bureau of Land Management, 1001 Howard Avenue, New Orleans, LA 70113.

The conference proceedings describe the marine environmental assessment needs related to petroleum exploration and development within the potential outer continental shelf lease sale area. The document includes the following: summary of available data, prediction of possible effects of drilling on the environment, identification of areas where more information is needed and suggestions for baseline and monitoring programs. The possibility of accidents resulting from geological hazards, the permanent destruction of unique environments and the effects of metals and hydrocarbons on aquatic organisms, are the major issues identified by the conference.

SUMMARY REPORTS

Description

In accordance with Section 252.4 of 30 CFR, the Geological Survey has proposed to prepare and distribute a set of Summary Reports covering single states or multi-state regions affected by OCS lease sale activities. The reports will differ in context and coverage to account for regional needs; however, their basic format will be compatible to permit regional comparisons and national data aggregations. The proposed outline for the Summary Reports includes:

- o geological and geophysical data summaries,
- o oil and gas resource and reserve estimates,
- o projections of the magnitude and timing of development,
- o descriptions of oil and gas transportation methods and
- o descriptions of the nature and location of nearshore and onshore facilities.

Documents

To date, none have been prepared for the Atlantic Area.

GLOSSARY

Active Fault - A fault along which there is recurrent movement.

Combination Trap - An underground formation with characteristics of both a structural trap and a stratigraphic trap.

Data - Facts and statistics or samples which have not been analyzed or processed.

Development - Activities which take place following discovery of minerals in paying quantities, including but not limited to geophysical activity, drilling, platform construction and operation of all directly related onshore support facilities and which are for the purpose of ultimately producing the minerals discovered.

Drainage - Migration of oil or gas in a reservoir due to a passive reduction caused by production for wells producing from the reservoir.

Established Area - Areas that have been leased and have undergone exploration and development of oil or natural gas.

Exploration - The process of searching for minerals. Exploration activities include: (1) geophysical surveys where magnetic, gravity, seismic or other systems are used to detect or imply the presence of such minerals and (2) any drilling, whether on or off known geological structures. Exploration also includes the drilling of a well in which a discovery of oil or natural gas in paying quantities is made and the drilling of any additional well after such discovery which is needed to delineate a reservoir and to enable the lessee to determine whether to proceed with development and production.

Field - An area underlain by one or more geologically related hydrocarbon reservoirs.

Frontier Area - New leasing locality where no extensive exploratory drilling or development drilling has taken place.

Geologic Hazards - Geologic features and conditions, which if undetected may pose varying degrees of risk to oil and gas exploration and development activities.

Geopressures - Those pressures in rocks where the pore-fluid pressures are greater than hydrostatic pressures.

Identified Resources - Specific accumulations of economic resources whose location, quality and quantity are estimated from geologic evidence supported in part by ongoing measurements.

Interpreted Information - Knowledge, often in the form of maps, developed by determining the geological significance of geological and geophysical data, analyzed geological information and processed geophysical information.

Mass Movement - A unit movement of a portion of the land surface as in creep, landslide or slip.

OCS Order - A formal numbered order, issued by the Director of the Geological Survey, that implements the regulations and specifically applies to operators in an area identified in the order.

Processed Geophysical Information - Data which have been processed. Processing involves changing the form of data to facilitate interpretation. Processing operations may include but are not limited to, applying corrections for known perturbing causes, rearranging or filtering data and combining or transforming data elements.

Production - Those activities which take place after the successful completion of any means for the removal of minerals, including such removal, field operations, transfer of minerals to shore, operation monitoring, maintenance and work overdrilling.

Proprietary Data - Geologic and geophysical data and immediate derivatives thereof which can not be released to the general public because of instructions imposed by contracts, Federal regulations or statutes.

Reserves - That portion of the identified resource which can be economically extracted.

Reservoir - An oil or gas accumulation which is separated from and not in oil or gas communication with any other such accumulation.

Resources - Concentration of naturally occurring solid, liquid or gaseous materials in or on the earth's crust in such form that economic extraction of the commodity is currently or potentially feasible.

Sand Wave - A large, ridge-like primary structure displayed on the upper surface of a sedimentary bed, having a shape somewhat resembling a water wave, and formed by high-velocity currents that move sand usually approximately normal to the direction of flow.

Seismicity - The relative frequency, intensity or magnitude and kind of natural earthquakes.

Shallow Gas - Gas contained in sediments of a shallow depth, usually less than 1,000 feet deep.

Slope Stability - The measure of ability of the material in a slope to maintain stability against the forces of gravity.

Slump - The displacement of rock or earth as a unit, generally downhill.

Stratigraphic Trap - A reservoir, capable of holding oil or gas, formed from a change in the character of the reservoir rock. For example, the loss of porosity and permeability in a tight sandstone updip forms a stratigraphic trap. Such a trap is harder to locate than a structural trap because it is not readily revealed by geological or geophysical surveys.

Structural Trap - A reservoir capable of holding oil or gas, formed from coastal movements in the earth that fold or fracture rock strata in such a manner that oil or gas accumulating in the strata are sealed off and cannot escape. In some cases "structure" may be synonymous with structural trap.

Structure - In some cases synonymous with structural trap. In other instances the term may be used to indicate a displacement of rock strata lacking a trap, as where a trap is present, lacking deposits of oil or gas in commercial quantities.

Well Log - A record of formations penetrated by a well, their depth, thickness, physical properties and, if possible, contents.

APPENDIX A

FEDERAL DEPOSITORY LIBRARIES

Under provisions of Title 44 of the United States Code, certain libraries are designated depositories for Government publications. Through them the Federal Government documents are made available to residents of every state, District of Columbia, Guam, Puerto Rico and the Virgin Islands. Distribution to the libraries is made by the Office of the Superintendent of Documents. The following libraries have received pre-sale EIS's for the Atlantic Area.

FEDERAL DEPOSITORY LIBRARIES

NORTH ATLANTIC

Connecticut

Bridgeport: Bridgeport Public Library, 925 Broad Street
Hartford: Hartford Public Library, 500 Main Street
New Haven: New Haven Free Public Library, 133 Elm Street

Delaware

Rehoboth Beach: Rehoboth Beach Public Library, Municipal Center, Rehoboth Avenue
Wilmington: Wilmington Institute Free Library and Newcastle County Free Library, 10th and Market Street

Maryland

Baltimore: Enoch Pratt Free Library, 400 Cathedral Street
Salisbury: Eastern Shore Area Library, 122-126 S. Division Street, 951Z

Maine

Augusta: Lithgow Public Library, One Winthrop
Portland: Portland Public Library, 619 Congress Street

Massachusetts

Boston: Boston Public Library, Copley Square
Christian Science Monitor, One Norway Street
Fall River: Fall River Public Library, 104 N. Main Street
Falmouth: Falmouth Public Library, Main Street
New Bedford: New Bedford Public Library
Provincetown: Provincetown Public Library, 330 Commercial Street

New Hampshire

Concord: Concord Public Library, 45 Grain Street
Manchester: Manchester City Library, 405 Pine Street

New Jersey

- Atlantic City: Atlantic City Free Public Library, Illinois and Pacific Avenues
Garden City: Nassau Library System
Trenton: Trenton Free Public Library, 120 Academy Street
Woodbridge: Free Public Library of Woodbridge, Main Library, George Frederick Plaza

New York

- Albany: Albany Public Library, 19 Dove Street
Bellport: Suffolk Cooperative Library System, 627 N. Sunrise Service Road
New York City: New York City Public Library, Fifth Avenue and 42nd Street

Pennsylvania

- Philadelphia: Free Library of Philadelphia, Logan Square

Rhode Island

- Newport: Newport Public Library, Aquidneck Park
Providence: Providence Public Library, 150 Empire Street

Virginia

- Norfolk: Norfolk Public Library System, 301 E. City Hall Avenue

MID-ATLANTIC

Connecticut

- Hartford: Hartford Public Library, 500 Main Street

Massachusetts

- Boston: Boston Public Library, Copley Square

New Jersey

- Atlantic City: Atlantic City Free Public Library, Illinois and Pacific Avenues
Elizabeth: Free Public Library of Elizabeth, 11 South Broad Street
Garden City: Nassau Library System
Trenton: Trenton Free Public Library, 120 Academy Street

New York

- Albany: Albany Public Library, 19 Dove Street
Bellport: Suffolk Cooperative Library System, 627 N. Sunrise Service Road
New York City: New York City Public Library, Fifth Avenue and 42nd Street

Rhode Island

- Providence: Providence Public Library, 150 Empire Street

SOUTH ATLANTIC

Georgia

- Atlanta: Atlanta Public Library, 126 Carnegie Way
Brunswick: Brunswick Regional Library, 208 Gloucester Street
Savannah: Savannah Public Library, 2002 Bull Street

Florida

- Daytona Beach: Volusia County Public Library, City Island
Jacksonville: Jacksonville Public Library System, 122 North Ocean Street
Melbourne: Melbourne Public Library, 540 Fee Avenue, East
St. Augustine: Public Library Association of St. Augustine, 12 Aviles Street
Tallahassee: Leon, Jefferson and Wakulla County Public Library, 127 N. Monroe Street
West Palm Beach: Palm Beach County Public Library System Headquarters, 3650 Summit Boulevard

North Carolina

- New Bern: Craven Pamlico Carteret Regional Public Library, 400 Johnson Street
- Raleigh: Olivia Raney Public Library, 104 Fayetteville Street
- Southport: Southport Brunswick County Public Library, 109 W. Moore Street
- Wilmington: New Hanover County Library, 409 Market Street

South Carolina

- Charleston: Charleston County Library, 404 King Street
- Columbia: Richland County Library, 1400 Sumter Street
- Georgetown: Georgetown County Memorial Library, Highmarket Street, Drawer D
- Myrtle Beach: Chopin Memorial Library, 14th Avenue, North

APPENDIX B

SUPPLEMENTAL READING

Documents described in this section are not used in any specific decisionmaking step, but are general sources of information pertaining to OCS activities.

SUPPLEMENTAL READING

o **DEROCS: a computer program to simulate offshore oil and natural gas development scenarios and onshore service base requirements**, Marcus, P. A., E. T. Smith, S. R. Robertson, and A. T. Wary, U.S. Geological Survey, Reston, Virginia, March 1977, 175 pp. Available as USGS open file report No. 77-130 from RALI Program Office, U.S. Geological Survey, National Center, Mail Stop 750, Reston, VA 22092; no charge.

DEROCS (Development of Energy Resources of the Outer Continental Shelf) is a Fortran IV computer program. This report describes how DEROCS constructs OCS resource development scenarios and quantifies the requirements for and impacts of the operation of the onshore service bases necessary to support offshore oil and gas operations. The authors present two examples of program application.

o **Identification and analysis of mid-Atlantic onshore OCS impacts**, prepared by Resources Planning Associates, Inc., for the Middle Atlantic Governors' Coastal Resources Council, Delaware State Planning Office, Dover, Delaware, 1976, 150 pp. Available from Resources Application, Room 3000, Federal Building, 12th and Pennsylvania Avenue, NW, Washington, D.C. 20461, no charge, (703) 566-9222.

This report provides an evaluation of six earlier studies describing onshore impacts on the Mid-Atlantic region as a result of offshore oil and gas exploration and development. The studies' methodologies, assumptions and projections of impact are compared, as well as the relevance of the six studies to the needs of the individual Mid-Atlantic states. Management decisions, policy issues and critical analyses for future studies are also investigated.

o **Mid-Atlantic regional study: an assessment of the onshore effects of offshore oil and gas development**, Woodward-Clyde Consultants, Clifton, New Jersey (now located in San Francisco, California), October 1975, 429 pp. Available from American Petroleum Institute, 2101 L Street, NW, Washington, D.C. 20037, for \$15.00, executive summary, \$1.00.

Estimates of the onshore impacts related to OCS development are discussed. The report found that onshore effects on natural systems will be minor if environmentally suitable sites are planned and selected. Demands for housing, land and recreation are relatively small compared to non-OCS demands created by population growth. Finally, the study concludes that economic benefits will accrue to the region from wages paid to workers, tax revenues and capital investment of the oil, natural gas and service industries.

o **Onshore facilities related to offshore oil and gas development: factbook**, November 1976, 422 pp., New England River Basins Commission, Boston, Massachusetts. Contact the Public Information Office, New England River Basins Commission, 55 Court Street, Boston, MA 02108.

The Factbook is an encyclopedic reference on the principal onshore facilities related to offshore oil and gas development. Each facility is described in detail as are the factors that influence, and the steps involved in siting the facility in a frontier area. Also described are the land, water, energy, transportation, labor and capital requirements and various environmental and construction impacts of each facility.

o **Onshore facilities related to offshore oil and gas development: methodologies for OCS-related planning**, March 1978, 151 pp., New England River Basins Commission, Boston, Massachusetts. Available from the Public Information Office, New England River Basins Commission, 55 Court Street, Boston, MA 02108.

The report details a systematic approach to assist officials responsible for planning for OCS-related facilities. The approach is divided into three major methodologies: (1) estimating levels of offshore exploration and development activity; (2) estimating the number and kinds of onshore facilities required and (3) identifying and assessing the impacts of alternative sites for facilities. Each component is a series of tasks and steps, which, when successively solved, satisfies the particular methodology. Numerous examples of these tasks and steps, in addition to a user's guide, are given.

o **Socioeconomic impact of Outer Continental Shelf, oil and gas development—a bibliography**, Pattison, Malka L., 1977, 63 pp. Available from the Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, VA 22202, no charge.

The bibliography lists reports available as of February 1977 which are concerned primarily with socioeconomic impacts of OCS oil and gas development, or which contain significant discussion of the socioeconomic issues. The references are annotated for better access to the reports.

o **Source book: onshore impacts of outer continental shelf oil and gas development**, prepared by the Conservation Foundation for the American Society of Planning officials, Chicago, Illinois, 1977, 180 pp. Available from American Society of Planning officials, 1313 East 60th Street, Chicago, IL 60637, no charge.

This document is a supplement to a series of workshops for state and local planners on the potential onshore impacts of oil and gas development on the Outer Continental Shelf. The source book is a structured guide to the following information: offshore oil and gas resources and extraction processes, offshore activities and related onshore facilities, onshore impacts of OCS oil and gas development and planning and management techniques available to states and communities. Sources provided include books, reports, periodicals and audiovisual information. State, Federal and regional agencies involved in OCS development and related planning are also listed, as are energy, industry and public interest groups.

APPENDIX C

GOVERNORS' DESIGNATED OCS REPRESENTATIVES

In accordance with the Outer Continental Shelf Lands Act Amendments of 1978, the Governor of any affected state may designate an appropriate state official to receive information as designated by the Secretary. The current list of official state OCS contacts is presented herein.

GOVERNORS' DESIGNATED OCS REPRESENTATIVES

Connecticut

Director, Natural Resources Center
Connecticut Department of Environmental Protection
State Office Building, Room 553
165 Capitol Avenue
Hartford, CT 06115
(203) 566-3540

Delaware

Director of the Office of Management, Budget, and Planning
Townsend Building, P. O. Box 1401
Dover, DE 19901
(302) 678-4271

Florida

Department of Administration
Division of State Planning
Room 530, Carlton Building
Tallahassee, FL 32304
(904) 488-2401

Georgia

Director, Physical and Economic Development Division
Office of Planning and Budget, Room 615
270 Washington Street, SW
Atlanta, GA 30334
(404) 656-3861

Maine

Director, Maine State Planning Office
184 State Street
Augusta, ME 04333
(207) 289-3261

Maryland

State Geologist, Maryland Geological Survey
Merryman Hall
The Johns Hopkins University
Baltimore, MD 21218
(301) 235-0771

Massachusetts

OCS Coordinator for Coastal Zone Management Program
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, MA 02202
(617) 727-9530

New Hampshire

State Geologist
James Hall, Room 117
University of New Hampshire
Durham, NH 03824
(603) 862-1216

New Jersey

Dr. Glenn Paulson
Assistant Commissioner
New Jersey Department of Environmental Protection
P. O. Box 1390
Trenton, NJ 08625
(609) 292-2906

New York

Mr. Gregory H. Sovas
Chief, OCS Studies Program
New York State Department of Environmental Conservation
50 Wolf Road
Albany, NY 12233
(518) 457-5962

North Carolina

Mr. J. C. Jones
Office of Marine Affairs
Department of Administration
Office of the Governor
116 West Jones Street
Raleigh, NC 27611
(919) 733-2290

Pennsylvania

Mr. Jim Seis
Administrative Assistant to the Governor
225 Main Capital Building
Harrisburg, PA 17120
(717) 787-2500

Rhode Island

Mr. William F. Carroll
Executive Assistant for Policy
Executive Chamber
228 State House
Providence, RI 02903
(401) 277-2071

South Carolina

Dr. Lamar Priester
Executive Director, Governor's Office
Office of Energy Resources
Edgar A. Brown Building
1205 Pendleton Street
Columbia, SC 29201
(803) 758-2050

Virginia

Mr. Edward F. Wilson
Coordinator, OCS Activities
509 9th Street Office Building
Richmond, VA 23219
(804) 786-8466

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